

Chapter 4

Rail Dispatching Operations and Procedures

Rail dispatching operations and procedures in a theater of operations differs from that on commercial railroads. In a theater, trains are operated by civilians and controlled by the military. Therefore, dispatching may remain unchanged if passenger train service is continued. However, troop, ambulance, and ammunition trains (used mainly for military purposes) may be assigned higher priorities than passenger trains when operated by the rail units.

DISPATCHING OPERATIONS

4-1. The method of dispatching trains may undergo radical changes. Threat forces during Army operations will attempt to disrupt operations with the destruction of trackage, bridges, signals, and other facilities. Rail operations must then be restored as quickly as possible. When service is resumed, what was formerly a double-track, high-speed road with automatic block signals may become a single track with restricted speed and an improvised signal system. Dispatching becomes more difficult and complex as single-track operations prevail. Light trains carrying less tonnage at lower speeds become the rule and circumstances determine movement priority.

4-2. Dispatching trains on a busy section of railroad is one of the most exacting tasks in the transportation field. The train dispatcher assists the chief train dispatcher. The train dispatcher must be able to make instant decisions with no margin for error. He has the same authority over train movement as the chief dispatcher. He must know the exact physical layout of the main track in his division. He must also know the capabilities of the various types of locomotives in use. He may also be required to judge the capability of individual locomotives only by their number designators. He must also be familiar with the engineer's ability to get their trains over the road.

4-3. The chief dispatcher at the division HQ keeps a record (train sheet) of the time, date, and place of each train, the dispatcher on duty, and so forth. The chief train dispatcher is responsible for the following records and reports.

DISPATCHER'S RECORD OF TRAIN MOVEMENTS (DA FORM 5613)

4-4. Figure 4-1 shows a sample of a DA Form 5613. As a train enters or leaves a terminal yard or station, the agent or operator notifies the dispatcher by telephone: for example, "Extra 194 by DN at 0525." The train sheet is kept in the dispatcher's office and provides a continuous, running record of all trains moving on the division. Therefore, the dispatcher can anticipate train meets and issue appropriate train orders. The following are instructions for filling out DA Form 5613.

- Trains move either east and west or north and south. The train sheet lists trains moving west or south on the left and those moving east or north on the right. The train sheet is kept for a 24-hour period, beginning with a new sheet at 0001 hours and ending at 2400 hours of each day. The train dispatcher signs his name and records his duty time in the block provided.
- The railway organization, location of the dispatcher, current date, commanding officer's name, type of track, and the chief dispatcher's name are recorded in the proper blocks.
- Four times a day the dispatcher records the condition of the weather along the division. The locomotive cannot pull as much tonnage, nor can the train maintain speed, in cold or severe weather conditions.
- The names of the stations and the reporting points on the rail line are listed in the center column. To the left of the center column, the distance is listed from the point of division origin to the end of the division, and is given in the superior direction. To the right of the station column, the siding capacity of each station is listed. This information is very important on a single-track line where trains must meet and pass. Trains should not contain more cars than the sidings can hold if they are to clear the main line and allow other trains to pass. Show the number or symbol of each train running during the record's time frame on the horizontal line headed "train symbol." Trains are listed in the blank columns beginning nearest the three center columns and extending outward in the order of their departure times. AMovP3 addresses how NATO forces will identify trains using an International Identification Code. To the immediate right of the departure time of a freight train at a station is listed the number of loaded and empty cars and the amount of tonnage in the train. In Figure 4-1, these figures are listed at the train's initial station and at other stations where changes take place.

Figure 4-1. Sample DA Form 5613

- The contents and destination of loaded cars may also be shown in the "Remarks" block.
- Arrival and departure times of trains moving west or south are entered to the left of the station column and read from top to bottom. Those moving east or north, entered to the right of the station column, are read from bottom to top. For trains moving west or south, the arrival time at each station is shown in the upper square and the departure time in the lower square. The reverse is true for trains moving in the opposite direction. If a train does not stop at a station, only one time is shown. The time is shown in large figures written diagonally over both the arrival and departure squares. Record delays in the "Remarks" block. The chief dispatcher will stock needed copies of this form in the Dispatcher's Office. Do not request through normal publications system.

COMBINED REGISTER OF TRAINS AND COMPARISONS OF WATCHES (DA FORM 4090-R)

4-5. Train registers are located at stations designated by timetable. This register is a permanent record of the movement of trains over the division. The conductor (or the engineman if there is no conductor) must check and sign the register before departing from a register station. While this is the responsibility of the train crew, station agents (when properly authorized) may enter the required information on the register and then report the train to the dispatcher. Figure 4-2 shows a sample of a DA Form 4090-R. The use of this form is to maintain a record of time comparisons. Instructions to complete the DA Form 4090-R are self-explanatory according to block heading. You may reproduce DA Form 4090-R on 8 1/2 x 11-inch paper. See Appendix A for a blank copy of DA Form 4090-R.

TRAIN ACCIDENT REPORTS

4-6. When a personal injury occurs or when the main line is blocked and train movements are affected, a report is submitted by the fastest available means to the chief dispatcher. The conductor, track foreman, or yardmaster submits a report for any accident involving cars, locomotives, or trains. The chief dispatcher promptly forwards the report to battalion HQ.

[illegible]

Figure 4-2. Sample DA Form 4090-R

SUPERINTENDENT'S TELEGRAPHIC REPORT OF ACCIDENT (DA FORM 5614-R)

4-7. The general superintendent of transportation prepares this form (Figure 4-3) when he receives a report of a train accident. This is an essential report to higher authority or other personnel concerned. Division chief dispatchers through railway command channels must submit accurate and concise information for its preparation. The accident number and the time and date of the accident are entered at the top of the form. A blank DA Form 5614-R is in Appendix A. You may reproduce this form on 8 1/2 x 11-inch paper. Instructions for those blocks that are not self-explanatory are also shown in Figure 4-3 (page 4-8).

STATION RECORD OF TRAIN MOVEMENTS AND OPERATOR'S TRANSFER (DA FORM 4093-R)

4-8. Station operators use this form (Figure 4-4, page 4-9) to record all train movements within their jurisdiction. Each station operator records the time of his shift and specific information on train orders and signals. Instructions for use of DA Form 4093-R are included in the form heading. A blank copy of DA Form 4093-R is in Appendix A. You may reproduce this form on 8 1/2 x 11-inch paper.

SINGLE-TRACK, DOUBLE-TRACK, AND MULTIPLE-TRACK OPERATIONS

4-9. A main track may consist of a single track or two or more tracks upon any of which the current of traffic may run in either direction. The three types of main track operations are discussed below.

SINGLE-TRACK OPERATION

4-10. In a single-track operation, dispatching is carried out by written train orders. A first-class train depends on the timetable schedule for its authorization. When leaving the starting terminal, the crew is authorized to travel along the route according to the established timetable schedule. On a single-track line, the timetable specifies the superior direction. Therefore, a first-class train traveling in the superior direction would be superior to all other trains on the line. Inferior trains must clear the main track completely by going into a siding or yard and line the switch for the main track. In no way should the arrival of the first-class train be delayed.

SUPERINTENDENT'S TELEGRAPHIC REPORT OF ACCIDENT <small>For use of this form, see FM 55-20. The proponent agency is TRADOC.</small>		ACCIDENT NUMBER 13	TIME 0030	DATE 2 Oct 97
TO General Manager 3rd Transportation Railway Command APO 301, San Francisco, CA		OPERATING UNIT 777th TROB		
TRAIN NUMBER 126	ENGINE NUMBER 2007	LOCATION Chan siding - Mile post 132		
ENGINE MEN Spc Leo Chester Pfc Marion Curry	CONDUCTORS Sgt. Thomas Reagan	BRAKEMEN Pfc Fred Stone Pfc Robert Dreame		
TYPE OF ACCIDENT Derailment		CAUSE Running switch		
TYPE OF TRACK <input type="checkbox"/> CURVE <input checked="" type="checkbox"/> TANGENT <input type="checkbox"/> CUT <input type="checkbox"/> FILL		WEATHER CONDITIONS Foggy		
SPEED OF TRAIN 5 MPH	OTHER TRACKS OBSTRUCTED BY ACCIDENT Single main track and siding at Chan			
NUMBER OF LOADED AND EMPTY CARS IN TRAIN 20 loaded - No empties		NUMBER OF CARS BETWEEN ENGINE AND DAMAGED CARS None		
POSITION OF ENGINE Leading truck derailed		ENGINE DAMAGE Traction motor housing		
SECTION MEN WORKING <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CAN TRACK BE CLEARED WITHOUT ASSISTANCE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	ADDITIONAL EQUIPMENT REQUIRED; FROM WHAT DIRECTION None		
MATERIALS REQUIRED No. 8 switch point, 2 rail lengths, 20 crossties, and proportionate OTM				
TIME WRECKER ORDERED NA	TIME WRECKER DEPARTED NA	TIME REQUIRED TO CLEAR MAIN TRACK 2 hours		
DELAYS TO OTHER TRAINS No. 8 - 1 hour 45 minutes No. 127 - 1 hour 15 minutes				
EXTENT OF DAMAGE TO OTHER CARS AND CONTENTS (Initials, number and type of car) DE Locomotive, 2007, damaged front steps and No. 1 and 2 traction motor housings				
WILL LIVESTOCK OR PERISHABLES IN TRAIN HAVE TO BE FORWARDED? IF YES, WHEN NA		QUANTITY AND TYPE OF CARS REQUIRED TO TRANSFER LIVESTOCK OR PERISHABLES None		
EXTENT OF PERSONAL INJURY (Name, address, and occupation of injured) (For additional space use reverse side) Pfc Marion Curry, Co. C, 777th TROB, APO 301, San Francisco, CA Superficial bruise on left shoulder.				
TREATMENT GIVEN INJURED First aid				
WITNESSES (Names and addresses) Kim Boik, Station Master, Chan No. 3, Chim Long, Chan, Korea				
REMARKS (For additional space use reverse side) None		SIGNATURE Lee T. Dunal, LTC, TC		

DA FORM 5614-R, DEC 86

Figure 4-3. Sample DA Form 5614-R

Figure 4-3. Sample DA Form 5614-R (continued)

To. Enter the name of organization to which report is submitted.

Operating Unit. Enter the name of railway operating unit at time of accident.

Location. Indicate where (place) accident occurred; for instance, by milepost.

Enginemen, Conductors, Brakemen. Enter names of each, respectively.

Cause. Indicate what caused accident.

Type of Track. Check box to show type of track.

Tracks Obstructed. Indicate any other tracks blocked by equipment.

Position of Engine and How Damaged. Annotate damage to locomotive.

Section Men Working. Check proper block to indicate if track repairs have started.

Track Can Be Cleared Without Further Assistance. Check proper block to indicate if help is needed to clear track.

If Not, What Required and From What Direction. Self-explanatory; if none, so state.

Material Required. Indicate what is needed to rehabilitate damaged track, rails, crossties, and so forth.

Delay to Other Trains. Indicate amount of time other trains were delayed.

When Will Perishables or Livestock Be Forwarded. Enter time and date.

Quantity and Type Cars Required. Self-explanatory; if none, so state.

Extent of Personal Injuries. Give name and address of each person injured and type of injury; if none, so state.

Treatment Given. Indicate type of treatment or comfort given to injured; if none, so state.

Witnesses. Self-explanatory; if none, so state.

Signature. Signature of official making report.

Figure 4-4. Sample DA Form 4093-R

DOUBLE-TRACK OPERATION

4-11. In a double-track operation, each track is designated a direction of traffic specified by timetable. No deviation by crews is allowed without specific orders from the dispatcher. The dispatcher must continue to ensure that inferior and superior trains do not meet and that opposing trains are separated. Although double-track operations are simpler than single-track operations, the density of traffic is generally two or three times greater than on a single line. Most double-track lines are equipped with automatic block signals. These signals require the dispatcher to space the trains so that neither of them are hindered by the reduce-speed and stop signals of the train ahead. Proper train spacing is a delicate phase of dispatching. Too much starting and stopping results from trains being too close together.

MULTIPLE-TRACK OPERATION

4-12. Multiple-track systems are rare in military operations. Since towers (as directed by the dispatcher) control movement, the dispatcher determines the flow of traffic for each train in order to provide greater movement flexibility and track use. On three- and four-track systems, the operating problems are even further reduced. Four tracks are ideal because they can provide high- and low-speed tracks in both directions. High-speed tracks are usually on the outside to permit passenger trains to load at stations. These tracks are often thought to be reserved for passenger trains only. However, express trains and fast freights can use them providing they can make passenger-train running time. The flow of traffic can be more rigidly enforced on a four-track system because there are two tracks running in each direction.

4-13. Some railroads make a strict distinction between the standards of low-speed and high-speed track. On the low-speed track, lighter rail is used, less ballast and subballast maintenance is performed, and tie renewal is considered less often than on the high-speed track. The tracks are designated either freight or passenger, and trains are interchanged only in emergencies. Continued operation of heavy freights over passenger tracks require constant maintenance work to keep them in the condition required to give maximum riding comfort.

4-14. Many railroads make no distinction between the standards of the low-speed and high-speed tracks. The weight of the rail is identical, and the ties and subgrade are the same. The terms "high speed" and "low speed" may be used to describe these tracks, but the timetable would refer to them as numbers 1, 2, 3, and 4. A train would generally only run against the flow of traffic if both tracks in one direction were blocked or otherwise rendered unusable.

DISPATCHING PERSONNEL

4-15. Railroad main line operations are complex, involving the movement of freight, passenger, and mixed (freight and passenger) trains from one terminal or yard to another over a division or subdivision of track. Competent dispatch personnel are needed in order to ensure that these coordinated operations are successfully accomplished.

CHIEF TRAIN DISPATCHER (CHIEF DISPATCHER)

4-16. A chief train dispatcher is in charge of the dispatch office. He supervises train movement, reroutes rail traffic in emergencies, determines train tonnage, orders motive power, determines rail line capacity, and establishes train movement priority. The chief dispatcher initials all orders, messages, and instructions. In any matter affecting main-track operations, he acts as the superintendent.

TRAIN DISPATCHER (ASSISTANT CHIEF DISPATCHER)

4-17. The assistant chief dispatcher may be assigned at a division terminal. An assistant chief must be qualified to assume responsibility of the chief dispatcher. He must also be qualified to assume responsibility of any train dispatcher working in the particular office, on shift, or in emergencies. A large portion of work may be devoted to processing telegraphic accident reports and in preparing train delay reports. The office train master or superintendent uses these reports. He does other related work as prescribed by the chief dispatcher.

SENIOR TRAIN DISPATCHERS AND TRAIN DISPATCHERS

4-18. A train dispatcher is responsible for main-line movement of passenger and freight trains on a division. His objective is to get scheduled trains from one end of the division to the other according to their published timetables. He must also get extras (unscheduled trains) over the road in the briefest (but safest) possible time.

CAR DISTRIBUTION CLERK

4-19. The car distribution clerk maintains visibility for all railcars (including loaded or empty cars) in the division area. The car distribution clerk will compare the car requirements for loading with the location of empty cars and will prepare the documentation for redistribution of railcars as desired. He will also report any delays in car unloading to the chief train dispatcher.

4-20. A car distribution clerk uses DA Form 5619-R (Figure 4-5, page 4-12) in performing his duties. A blank copy of DA Form 5619-R is shown in Appendix A. You may reproduce this form on 8 1/2 x 11-inch paper.

4-21. The number of empty cars shown on the various yard reports are totaled by the distribution clerk and entered on the consolidated empty car report. The forms for this report are not only different among railroads but also between civilian and military railroads. As empties move out of a yard, the distribution clerk deducts them from his master report. The next report from the yard omits those moved but includes others accumulated since the previous report. A report from a yard often does not change greatly from its previous one. The principal change is in the figures for "switched" and "not switched" cars.

DAILY EMPTY CAR SITUATION REPORT										RAIL YARD		DISTRIBUTION CLERK		DATE					
For use of this form, see FM 55-20. The proponent agency is TRADOC.										Moxey		Pfc. Charles Saunders		30 June 1998					
NO. OF CARS	BOX CARS			WOODEN DECK			STEEL DECK			WITH CHAINS			GONDOLAS			HOPPERS		COVERED HOPPERS	NO. OF CARS
	40 FT	50 FT	60 FT	40 FT	50 FT	60 FT	40 FT	50 FT	60 FT	40 FT	50 FT	60 FT	40 FT	50 FT	60 FT	40 FT	50 FT		
SWITCHED																			
NOT SWITCHED		33																	
SWITCHED																			
NOT SWITCHED		24																	
SWITCHED																			
NOT SWITCHED		21																	
SWITCHED		2																	
NOT SWITCHED																			
SWITCHED		2																	
NOT SWITCHED																			
TOTALS		78																	
INSTRUCTIONS										REMARKS									
1. This report must be compiled every six hours beginning at 0000 hours each day and phoned to the distribution clerk. 2. Use "Remarks" column to describe any type of car not listed above. 3. Show under "Remarks" any cars on which the air has been tested and which are ready for immediate movement. 4. Indicate under "Remarks" how many tracks are blocked by empties ready for movement.										75 - 50 TON Hoppers ready for movement - air OK.									

DA FORM 5619-R, DEC 86

Figure 4-5. Sample DA Form 5619-R

TIMETABLE

4-22. A timetable authorizes the movement of scheduled trains. Designators in the timetable show train superiority. First-class trains are superior to all other class-designated trains. Extra or unscheduled trains are inferior to all regular trains having a class designator. No superiority or inferiority exists between extra trains. The timetable on a single track also specifies the superior direction. Division timetable pages dealing with schedules appear similar to those in the timetables furnished to the traveling public. The two timetables should not be confused because the division timetable contains much greater detail. You could use the division timetable as a supplementary book of rules to amend, supplement, extend, and even interpret many of the standing operating rules.

4-23. In addition to the schedule of trains, a typical division timetable includes a variety of information. Table 4-1 shows the various types of data and instructions that may be found in a division timetable.

4-24. When schedules are worked out for publication in a single-track timetable, the meets of scheduled trains are planned so train orders are unnecessary. However, scheduled trains may often run late. When they do, train orders must be issued to other trains on the line to assist the overdue trains in getting back on schedule or to prevent them from delaying other trains or operations.

Table 4-1. Data in a Division Timetable

Reduce speed areas	Company doctors, surgeons, and oculists.
Yard limits	
Weight limitations of--	Special signal indications by name, location, and significance.
Track	
Bridge	Passing sidings and their capacity in cars (available footage).
Trestles	
Coal tipples	Location of and special instructions regarding--
Engine restrictions	Spring switches.
Close-clearance points	Time relay switches
	Derails.
Location of--	New or nonstandard switching and signaling mechanisms.
Fuel and water facilities	
Standard clocks	Special instructions on--
Telegraph offices	Care and lubrication of journal boxes.
First aid supplies and stretchers	Handling of cars having overheated journal bearings (hotboxes).

RUNNING AHEAD OF SCHEDULE

4-25. The right of a regular train to occupy the main track at a particular time is established in the timetable. The train must travel in strict accordance with the published time figures in the train schedule. A train cannot gain time en route and arrive at the various stations before it is due. A train may gain time between any two successive stations, but it must not pass the advance station earlier than the time shown in the timetable. When yard crews desire to cross or foul main tracks, or when an inferior train occupies a track ahead of a superior one, crews must adhere strictly to the published time figures in the timetable. Yard crews must never operate on or across main tracks (unless within yard limits) without the authority of the dispatcher.

RUNNING BEHIND SCHEDULE

4-26. When a train becomes late according to its schedule, the result is many other delays to inferior trains running over the division. Likewise, yard engines required to use or cross the main tracks in doing their work may also be delayed. When a regular train becomes late, the dispatcher must be cautious in authorizing movements that might interfere with its progress and efforts to get back on schedule. The dispatcher would likely have no way of knowing how many minutes the engineer may have gained since he reported past the last station. If the dispatcher takes no positive action, the crews on the division must respect the published time until they are otherwise directed by a train order.

LOSS OF TIMETABLE SCHEDULE

4-27. On occasion, a scheduled train may lose its right and its schedule. With a loss of schedule, the train loses its right to continue occupying the main track. Loss of schedule and restricted superiority are entirely different events and distinction must be clearly understood. A train may have its timetable superiority temporarily suspended by a train order. This suspension puts restrictions on the train. These restrictions are only temporary and the train continues on its normal schedule after the train order is fulfilled. However, on two occasions the train actually loses its schedule and therefore, its superiority.

MORE THAN TWELVE HOURS LATE

4-28. When a scheduled train becomes more than 12 hours late, it is said to "die on its schedule." A train will die on its schedule if it arrives more than 12 hours late at a scheduled station or departs more than 12 hours late. This means that it has lost its schedule and that all train orders, if it holds any, are annulled. The train can proceed from the point where it loses its schedule only on new train orders from the dispatcher. FM 55-21 specifies both arriving and leaving time as conditions in determining if a train will lose its schedule. In either event, the dispatcher would have to recreate the train as an extra or run it as a section of another scheduled train. Loss of schedule should not be a common occurrence because some positive action should be taken to assist a train or annul its schedule before it becomes 12 hours late.

CHANGE OF TIMETABLE

4-29. A train may lose its schedule because a new timetable is issued. When a train is late and is going to overlap a new timetable, the train's schedule must be annulled and recreated as an extra.

SUPERIORITY AND RIGHT

4-30. "Right" as a dispatcher uses it, can be conferred by train order alone. "Superiority" is granted by the timetable based on a train's superior class or superior direction. A regular train may have timetable authorization or timetable superiority, but not necessarily superiority by right. In single-track operations, a train is generally superior to another train by right, class, or direction—with right being superior to class or direction. Direction is superior between trains of the same class. In double-track operations, a train is generally superior to another train by right or class—with right being superior to class. Direction is not significant in double-track operations since each set of tracks would normally carry traffic in the opposite direction. Direction is a factor in single-track operations since trains can travel toward each other on the same track.

4-31. Class is conferred by timetable and cannot be raised or lowered by train order. Class can be taken away by annulling the train schedule and running the train as an extra. Extra trains are inferior to all others. On most railroads, when two extra trains meet on a single track, the train moving in the superior direction holds main track, while the other takes siding.

TRAIN ORDERS

4-32. DA Form 4092-R authorizes the movement of trains not provided for in timetables. A sample of a DA Form 4092-R is shown in Figure 4-6. A blank copy of DA Form 4092-R is shown in Appendix A. You may reproduce this form on 8 1/2 x 11-inch paper. A train dispatcher issues the train order orally by radio or by telephone through a station agent. The station agent writes the order as received and repeats back the information to the sender to make sure it is accurate. The written order is handed to passing train crews. Train orders are numbered consecutively each day beginning at 0001 hours and are in effect until they have been fulfilled, superseded, or annulled. When subdivisions of a railroad are under the jurisdiction of more than one dispatching office, a different series of numbers are used by each office to prevent duplicating numbers for crews operating in more than one dispatcher's territory. Orders are addressed to station agents, conductors, enginemen, or anyone who is acting as a pilot. FM 55-21 provides specific guidance on completing and purposes of train orders.

4-33. A train order conveys the dispatcher's instructions to the crew. An order may amend, annul, or supersede the class and directional superiority that the timetable establishes. However, it does not waive compliance with a rule for one train unless it instructs another crew to protect the first train.

4-34. When the train order controls movements, the dispatcher's movement plan must be totally correct. Orders must be transmitted, relayed, or otherwise delivered in a foolproof manner. The language of the order must be unmistakably clear to prevent misinterpretation. Strict accuracy of stated time, engine number, station call letters, and direction is critical.

4-35. Crews receiving train orders must properly interpret and execute the orders. With involved orders or series of orders, careful reading and concentration are necessary. Crew members must read and repeat orders and then listen to others read and repeat them. It is prohibited for one member to read and interpret orders to other members. Other members may be influenced by incorrect interpretation and they, in turn, may also misinterpret the order. Discussing complicated orders is advisable, and complete and unanimous agreement should exist before acting on an order.

4-36. Dispatcher's should write train orders in clear and legible handwriting. In writing orders, even hours should not be used in stating time. Specifying time in even hours is conducive to misunderstanding. When time normally would be 1300, it should be adjusted a little ahead or a little behind (for example 1301 or 1259).

TRAIN ORDER (TM 55-200)		TRAIN ORDER NO. 38		FROM Conroy 15 Jan 1998	
TO C&E No. 34 Eng 345					
AT (Station) BO		X		OPERATOR	
TIME					
TRAIN ORDER No. 34 Eng 345 meet Extra 1552 West at BL.					
SAMPLE					
REPEATED			CHIEF DISPATCHER		
MADE Com		TIME 14 40		OPERATOR Gregory	

DA FORM 4092-R, 1 MAY 73

Replaces DA FORM 55-203,
1 AUG 53, which is obsolete.

Figure 4-6. Sample DA Form 4092-R

4-37. When dictating train orders, the dispatcher writes in the train-order book as he reads. He records all stations and trains to which the order is addressed. Each operator copies the entire text of the order in longhand and puts his call letters in the heading. Operators repeat the order from their copy in the same sequence as they were addressed. Figures, engine numbers, and dates are given by pronouncing the number followed by the identification of the individual digits that make up the number. For example, Eng. 345 (three hundred forty-five, three-four-five) or 14 November (fourteen, one-four). Use this procedure in dictating and repeating train orders.

4-38. After the order is copied, the first operator addressed by the dispatcher reads the order back. As the operator repeats the order, the dispatcher underscores each word. If the repetition is correct in all respects, the dispatcher completes the order by saying "complete" and giving the exact time. The word "complete" (abbreviated "com"), is written along with the time in the appropriate spaces at the bottom of the train order (see Figure 4-6). Then, in turn, each of the other operators repeats the order from his written copy.

4-39. As the order is read, the dispatcher underscores each word in his train-order book and completes the order as he did for the first operator. Train orders have no validity until they have been completed according to the superiority of the particular trains. The order for the superior train, which is being restricted, must be completed before the order for the inferior train, which the order helps. The only exception to this procedure is known as the "X" response.

4-40. When an order has been transmitted to several offices, the receiving operators must repeat the order at once. The order is repeated in the succession in which the offices are addressed. The dispatcher and all operators on the wire listen for any flaws or omissions in the repetitions. Occasionally, the last operator must repeat the order first. This is permitted when the order can be completed and delivered to an inferior train, which would otherwise be delayed while several other operators are repeating the order to the dispatcher. When this occurs, the dispatcher directs that the operator receiving the order for the superior train give the "X" response. This allows the operator copying the order for the inferior train to repeat his order first and, when finished, to have it delivered. Once the "X" response is given, the order will be repeated and made complete to the inferior train before the operator copying for the superior train repeats his order. When the "X" response has been given, the order to the superior train becomes a holding order and cannot be delivered until it has been repeated and completed.

ORDERS AFFECTING SCHEDULED TRAINS

4-41. A run-late order has the same effect as changing the published train schedule for the particular trip. It sets back the schedule by as many minutes as the train is late. In handling late trains, the dispatcher has the following three options:

- Give the crew a run-late order to run late from origin to destination.
- Issue no restricting orders and permit the crew to make up as much of the late time as possible.
- Give the crew a wait order, which would specify the earliest time the train could depart the stations shown in the wait order.

A run-late order does not help the late train order because it does not permit the train to make up any of the lost time. However, a run-late order may be helpful to an inferior train. When a dispatcher issues a run-late order, he is amending the timetable schedule (called "putting out time") for the particular train for the particular trip. Therefore, he is granting others the use of the time represented

by the difference in minutes between the advertised and the run-late time. If the dispatcher takes no train-order action, the delayed train would be free to make up some of the time. However, other trains and yard crews would not know the precise time to expect the train, and they could not depend on using the full lost time because this figure might be progressively reduced as the train travels over the division. Issuing a run-late order guarantees to all concerned that the amount of lost time will not be reduced.

4-42. A wait order, also called a time order, may be issued instead of a run-late order. It is not popular with all dispatchers and some railroads prohibit its use. A wait order permits the engineer to make up time and tells everyone concerned about how much time will be made up. The order permits a train to make up a specified number of stations, but the train may not leave a station before a stated time. A new schedule is written for most of the run. In effect, the wait order shortens the individual running time between certain stations.

CLEARANCE FORM "A"

4-43. A train must first receive a DA Form 4091-R (Figure 4-7, page 4-20) before leaving a train order station. A blank copy of DA Form 4091-R is shown in Appendix A. You may reproduce this form on 8 1/2 x 11-inch paper. This form is not required if a train is to do station work or enter a siding. Information entered on the form must be accurate and correct without any erasures or alterations. The number of orders for the train and the number of each order must be entered on the form and checked with the train dispatcher. The number must be identical with those entered in the dispatcher's train-order book. The dispatcher gives the station agent the okay, the time the clearance form was checked for accuracy, and he initials for the chief train dispatcher. He makes a record of the clearance in his book. The station agent enters the information received on the clearance form. The clearance form and train orders are then given to the proper personnel to be carried out.

4-44. Before leaving, the conductor and engineman must know that the numbers shown on the clearance form correspond with the orders received and that all information required on the form is correct. Notice in Figure 4-7 that a space headed "do not leave before" is provided on the form. This space is used for many purposes, but the most important one is the spacing of trains. By designating the time the train should leave, the dispatcher controls the distance and time between trains. See FM 55-21 for more detailed information.

CLEARANCE FORM "A" (TM 55-200)		DATE <i>15 Jan 1998</i>
STATION <i>Hanks</i>		
CONDUCTOR AND ENGINEER <i>No. 145</i>		
ORDERS (If no orders, indorse "NONE") <i>18, 23</i> SAMPLE		
OK AT (Time) <i>1415</i>	CHIEF DISPATCHER <i>LB</i>	
DO NOT LEAVE BEFORE (Fill in when necessary to comply with rule 221) <i>1418</i>		
BLOCK (Fill in only when operating under Manual Block System)	OPERATOR <i>Ryan</i>	
Conductor and engineer must have a copy and see that their train is correctly designated in the above form, also that the numbers of all train orders received correspond with numbers inserted above.		
OPERATOR MUST RETAIN A COPY		
DA FORM 4091-R, 1 MAY 73		REPLACES DA FORM 55-200 1 JAN 50 WHICH IS OBSOLETE

Figure 4-7. Sample DA Form 4091-R

TRAIN REGISTERS

4-45. When a train prepares to leave its starting point, the crew has no way of knowing whether all superior trains have arrived and departed. The crew also has no way of knowing whether any superior trains that have passed were displaying signals for following sections. In some areas, the dispatcher advises a crew by an order of the superior trains for which they must wait before going out on the main track. At other areas, train registers are kept to furnish this information for all concerned. When a train arrives at a station where it has work or when it reaches a junction point, the conductor signs the register. He writes in the number, class, arrival time of his train, and the type of signals it is displaying (if any). Just before the train leaves, the conductor checks the register for other arrivals or departures that may be superior and then enters his departure time. Extra trains generally having no stops where the register is located are not stopped simply to register. Timetables of most railroads provide that extra trains may register without stopping. Instead, the crew throws off a message containing the necessary information and the operator enters it in the train register.

TRACK WARRANTS AND BULLETINS

4-46. The following rules pertain to those orders and instructions governed by track warrants and bulletins. These rules are applicable only within TWC limits. Figure 4-8, page 4-24, shows an example of a type of track warrant.

RULE 400. AUTHORITY

4-47. Where designated by special instructions or general order, use of the main track will be authorized (under the direction and over the signature of the train dispatcher) by issuance of a track warrant. Track warrants are numbered consecutively from the beginning of each calendar date. Within TWC territory, there is no superiority of trains and trains will not be authorized by train order or timetable schedule.

RULE 401. DESIGNATED LIMITS

4-48. The limits of a track warrant are designated by specifying the track, where required, and exact points such as switches, mile poles, or identifiable points. Station names may be used. When a station name is used to designate the first named point, the authority will extend from the last siding switch or from a station sign if there is no siding.

4-49. When a station name is used to designate the second named point, the authority extends to the first siding switch or to the station sign if there is no siding. At the second named point, authority extends to the last siding switch when specific instructions include "hold main track at last named point."

RULE 402. REQUESTING

4-50. Personnel requesting a track warrant must advise the train dispatcher of the movements to be made and, when applicable, the tracks to be used and time required.

RULE 403. COPYING

4-51. The conductor and the engineer must have a copy of the track warrant addressed to their train or engine. The track warrant will show the date, location, name of person who copied it, and any specific instructions issued. All information and instructions are entered on the track warrant form provided and repeated to the train dispatcher. The dispatcher will check the copy and, if correct, will give an "OK" and the time. The OK time is entered on the track warrant and repeated to the train dispatcher. The track warrant is not considered in effect until the OK time is shown on it. If the track warrant restricts movement or authority previously granted, it is not considered in effect by the train dispatcher until acknowledgement of the OK has been received. Track warrants are relayed by authorized personnel, who must then record the message on a track warrant.

RULE 404. DESIGNATION OF TRAINS

4-52. In track warrants and track bulletins, trains are designated by engine number and direction when applicable. When an engine of another company is used, it is designated by the initials or name of the company preceding the engine number.

RULE 405. MECHANICAL TRANSMISSION

4-53. At points designated by special instructions, track warrants and track bulletins may be transmitted mechanically. When so transmitted, repetition will not be required. OK time will be given at the time transmitted and the name of the train dispatcher will be shown in the space provided for name of copying personnel. Track warrants restricting the authority or movement of a train must not be sent in this manner unless it is known that the train being restricted will not leave the point without receiving the track warrant. Special instructions will prescribe how track warrants and track bulletins are to be delivered at these points.

RULE 406. SPECIFIC INSTRUCTIONS

4-54. Track warrants will include specific instructions that must be complied with by those addressed. Each track warrant must be given in the same words to all personnel addressed. Once in effect, the track warrant must not be added to or altered in any manner except as provided by Rule 411.

RULE 407. CHANGING TRACK WARRANT

4-55. When a track warrant is in effect and the limits or instructions are changed, a new track warrant is issued with the instructions and will include the words "Track Warrant No _____ is void." When a track warrant of a previous date is voided, the date must be included. The previous track warrant will no longer be in effect.

RULE 408. OPERATING WITH TRACK WARRANT

4-56. A track warrant authorizes the train or engine addressed to occupy the main track within designated limits. The train must not foul a switch at either end of the limits that may be used by an opposing train or engine to clear the main track. Movement must be made as follows:

- When authorized to proceed from one point to another, movement is authorized only in the direction specified.
- When authorized to "work between" two specific points, movement may be made in either direction between those points.

RULE 409. OCCUPYING SAME LIMITS

4-57. Not more than one train or engine is permitted to occupy the same or overlapping limits of a track warrant at the same time, except in the following circumstances:

- All trains or engines within the limits have been authorized to move only in the same direction and are required to provide flag protection as prescribed by Rule 99.
- Two or more crews performing switching or work service have been notified of each other and instructed that all movements must be made at restricted speed within the overlapping limits.

RULE 410. IN EFFECT

4-58. A track warrant is in effect until a crew member reports the train clear of the limits, the warrant becomes void, or the time limit expires. The crew member must report to the train dispatcher when they have cleared the limits. If a time limit is shown on the track warrant, a train or engine must be clear of the limits by the time specified, unless another track warrant has been obtained.

RULE 411. MARKING VOID

4-59. The word VOID must be written legibly across each copy of the track warrant when a crew member has reported the train or engine clear of the limits, the time limit specified has expired, or the track warrant has been changed as prescribed by Rule 407.

RULE 412. PROTECTING MEN OR MACHINES

4-60. A track warrant permitting men or machines to occupy or perform maintenance on main track without other protection is issued in the same manner as that for trains or engines.

4-61. A track warrant must not be issued to protect men or machines within the same or overlapping limits with a train or engine, except in the following circumstances:

- All trains or engines authorized to occupy the same or overlapping limits have been authorized to move in one direction only and the track warrant specifies that it is granted behind such trains or engines.
- Trains or engines authorized to occupy the same or overlapping limits have been notified of the authority granted to the men or machines, have been instructed to make all movements at restricted speed and have been instructed to stop short of men or machines on or fouling track. The person in charge of maintenance must be so notified by a track warrant. If track is not safe for movement at restricted speed, personnel in charge must protect such track by placing red flags according to Rule 10(A).

RULE 413. MOVEMENT AGAINST THE CURRENT OF TRAFFIC

4-62. When a track warrant authorizes movement against the current of traffic, the train or engine must use only the track designated within the limits specified.

TRACK WARRANT	
NO. _____	DATE: _____
TO: _____	AT: _____
1. <input type="checkbox"/> TRACK WARRANT NO. _____ IS VOID.	
2. <input type="checkbox"/> PROCEED FROM _____ TO _____ ON _____ TRACK.	
3. <input type="checkbox"/> PROCEED FROM _____ TO _____ ON _____ TRACK.	
4. <input type="checkbox"/> WORK BETWEEN _____ AND _____ ON _____ TRACK.	
5. <input type="checkbox"/> NOT IN EFFECT UNTIL _____.	
6. <input type="checkbox"/> THIS AUTHORITY EXPIRES AT _____.	
7. <input type="checkbox"/> NOT IN EFFECT UNTIL AFTER ARRIVAL OF _____ AT _____.	
8. <input type="checkbox"/> HOLD MAIN TRACK AT LAST NAMED POINT.	
9. <input type="checkbox"/> DO NOT FOUL LIMITS AHEAD OF _____.	
10. <input type="checkbox"/> CLEAR MAIN TRACK AT LAST NAMED POINT.	
11. <input type="checkbox"/> BETWEEN _____ AND _____ MAKE ALL MOVEMENTS AT RESTRICTED SPEED. LIMITS OCCUPIED BY TRAIN OR ENGINE.	
12. <input type="checkbox"/> BETWEEN _____ AND _____ MAKE ALL MOVEMENTS AT RESTRICTED SPEED AND STOP SHORT OF MEN OR MACHINES FOULING TRACK.	
13. <input type="checkbox"/> DO NOT EXCEED _____ MPH BETWEEN _____ AND _____.	
14. <input type="checkbox"/> DO NOT EXCEED _____ MPH BETWEEN _____ AND _____.	
15. <input type="checkbox"/> PROTECTION AS PRESCRIBED BY RULE 99 NOT REQUIRED.	
16. <input type="checkbox"/> TRACK BULLETINS IN EFFECT:	
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-bottom: 1px solid black; width: 100%;"></div>	
17. <input type="checkbox"/> OTHER SPECIFIC INSTRUCTIONS:	
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-bottom: 1px solid black; width: 100%;"></div>	
OK _____ DISPATCHER _____ RELAYED TO _____ COPIED BY _____ LIMITS REPORTED CLEAR AT _____ BY _____ (Mark "X" in box for each item instructed)	

Figure 4-8. Type of Track Warrant

TRACK BULLETIN (DA FORM 5706-R)

4-63. Within TWC territory and other territories designated by special instructions; the train dispatcher, as required, will issue DA Form 5706-R (Figure 4-9, page 4-26). Bulletins contain information as to all conditions affecting the safe movement of trains or engines. When track bulletins are authorized, trains and engines must receive a track warrant at their initial station unless the train dispatcher instructs otherwise. All track bulletins, which affect their movement, must be listed on the track warrant. The conductor and engineer must have copies of all track bulletins listed. Each crew member must read and understand the requirements of any track bulletin he receives. Figure 4-9 shows a completed copy of DA Form 5706-R. A blank copy of DA Form 5706-R is shown in Appendix A. You may reproduce this form on 8 1/2 x 11-inch paper. Instructions for completing this form are also shown in Figure 4-9, page 4-27.

EXTRA TRAINS

4-64. An extra train is a train not designated by timetable. These trains are designated as extra, extra passenger, and extra work trains. Since extra trains are not authorized by timetable, they are identified by the number assigned to the locomotive pulling the train. For example, when locomotive 310 is used to move a train eastward, the train is numbered "Extra 310 East" or "Work Extra 9220."

WORK TRAINS

4-65. Work extras are work trains from which personnel perform track maintenance and construction along the right-of-way between specified points. Since these trains move in both directions, no directional designator is used when referring to them. Unless provided in a train order, a work extra must clear all regular trains and protect against other extras in both directions. A work extra may not protect against a regular train; that is, work on the time of an overdue scheduled train under flag protection unless instructed to do so by a train order. A train is "protected" when the crew stations a flagman adequately ahead or to the rear of the stationary train to stop any approaching train. Since work trains are almost always stationary, it is practical to have them protect themselves against all trains. Work trains are located fairly close to a siding so that they can enter the siding to clear the main track as another train approaches. The work train's conductor ensures that his train clears all regular trains as specified by the rules. When a wayside dispatcher telephone is near, the conductor maintains almost constant contact with the dispatcher regarding the approach of extras. A work train that occupies a main track has a flagman who must flag the main track to alert any approaching train. He is relieved from flagging only when his train clears the main track. A number of blasts sounded on the locomotive's whistle signals that the track is clear.

TRACK BULLETIN						NUMBER		DATE		
For use of this form, see FM 55-20. The proponent agency is TRADOC.						7-30		30 June 1998		
DIVISION			TO			AT				
Rocky Mount			Smith			Morton				
This bulletin supersedes bulletin number: 7-29						dated: 30 June 1998				
LINE NO.	LIMITS MP - MP	BETWEEN STATION AND STATION		EFFECTIVE TIME FROM - TO	TRACK NO.	AT MP	DIRECTION	SPEED MPH (KM)	FLAGS	FOREMAN OR GANG NO.
1	34.1-38.2	Morton	Baker	0600-1500	1	34	East	10	Yes	George
2	27.4-26.8	Slay	Wombat	0700-2330	2		West	15	No	Ester
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										

SAMPLE

OTHER CONDITIONS Line #1 - Watch out for trackmen on track #1.	OK	0100 30 June 1998
	COPIED BY	Smith
	DISPATCHER	Roy
	RELAYED TO	

DA FORM 5706-R, OCT 88

Figure 4-9. Sample DA Form 5706-R

Figure 4-9. Sample DA Form 5706-R (continued)

Number. Enter track bulletin form number.

Date. Enter current date.

Division. Enter territory in which train is operating.

To. Identify train for which bulletin is issued.

At. Enter location of train that will receive the bulletin.

This Bulletin Supersedes Bulletin Number. Enter number of bulletin which is being superseded.

Dated. Date of superseded bulletin.

Line No. Place number for each additional instruction or order pertaining to bulletin. Include information from any previous superseded bulletin or bulletin that has not been superseded and pertaining to new track bulletin.

Limits MP to MP. Enter the milepost numbers between which the bulletin is in effect.

Between Station and Station. Enter the names of the stations between which the bulletin is in effect.

Effective Time From-To. Enter times which bulletin will be in effect.

Track No. Enter number or name of track on which the bulletin is in effect.

At MP. Enter number of milepost at which flag is displayed.

Direction. Enter direction(s) for which bulletin is in effect.

Speed MPH (KM). Enter maximum speed which may be used over territory which the bulletin covers.

Flags. Enter YES if protective flags are displayed. Enter NO if protective flags are not displayed according to Rule 10.

Foreman or Gang No. Enter foreman's name or gang number under whose authority bulletin is imposed.

Other Conditions. Enter any additional instructions or additions to track bulletin that are not covered in previous columns.

OK. Enter time bulletin was copied.

Copied By. Enter name of person copying bulletin.

Dispatcher. Enter name of dispatcher.

Relayed To. Enter person to whom bulletin was relayed.

Work Train Orders

4-66. When a work train must frequently move back and forth, it is impractical to have the flagman walk ahead of the train. The dispatcher, knowing the kind of work being done and the extras moving in the area, may issue an order that permits the work train to move unhampered. If no extra is to arrive at the work limits before a specified time, the dispatcher may issue a train order that will permit the maintenance personnel to carry out their tasks without protecting the extras until that time.

Protecting Against Work Trains

4-67. Trains of superior class do not protect against work trains. On double track, all operating crews know the location of the work train's work area. Notices posted in crew offices along the line specify the work area, the number of days the work will be in progress, and a reduced-speed limit for the area. On single track, all trains in each direction are given copies of the work extra's train orders. Instructions generally require all work extras to clear the trains without delay. However, no approaching train, regardless of superiority, tonnage, or importance will run past a work train flagman.

Military Work Trains

4-68. In a theater of operations, it may be necessary for all trains to protect against work trains—signifying that the work train has a higher priority than the trains hauling troops or supplies. In civilian practice, a work train may be in a particular location to do work solely to improve passenger comfort or to make long-range repairs necessary to protect capital investment. Under these conditions, it is much more economical for a work train to protect against and clear the time of all trains. A military work train may be found blocking the main track because of more pressing reasons. In a theater, passenger comfort and long-range maintenance are not main priorities. Work trains operate only when absolutely necessary to keep trackage reasonably fit for supply and troop trains. Failure to do track work quickly could result in a blockage in which no trains would be able to move.

Proper Work Train Flagging

4-69. Work train flagging is almost impossible to over-emphasize. When the train is on the main track, the flagman protects its rear by stationing himself far enough back to stop any approaching train. On single-track lines, the forward end of the train must be protected in a similar manner. When the work train pulls into a siding and clears the main, an appropriate number of blasts are sounded on the whistle. This is called "whistling in" the flagman. Before the train again blocks the main, a specified number of blasts are sounded and the flagman goes out to flag. This is called "whistling out." The number of blasts varies according to the direction in which the train is headed and to the number of main tracks. The alternate whistling in and whistling out, which occurs when a train clears and blocks the main, involves a hazard that operating rules do not stress and one that safety spokesmen seldom point out. The danger that occurs during flagging is that the flagman may forget whether he is on the main track or in the siding. To keep track of his position, the flagman maintains radio contact with the work train conductor.

SECTIONS

4-70. Running additional sections are often necessary when handling passenger trains. A section is one of two or more trains running on the same schedule. Technically speaking, there is no such thing as a passenger train. A train either has a class designator or it is an extra. While it appears logical that if there are no passenger trains, there could be no extra passenger trains. Some railroads require all trains be designated by class or extras. Other railroads recognize the need for the extra passenger train designation and use it for trains that cannot be run on another train's schedule. This designator receives more respect from yard crews and from crews of trains of equal class. However, crews of scheduled trains must regard the extra passenger as inferior to their own.

4-71. The dispatcher, when required, could authorize an additional train and call it a section. To give this section first-class standing, the dispatcher can run it as a continuation of a first-class scheduled train and call it a "second section." The dispatcher can give this section right over other trains that would otherwise be superior by calling the section "Second 87" or some other train number. By doing so, the regular train becomes "First 87." Both trains would receive train orders, and the engine of the first section would have to display signals for another section.

CENTRALIZED TRAFFIC CONTROL

4-72. Operating a rail division controlled with CTC is much simpler than operating by the other methods. The dispatcher merely flips a switch on the CTC panel. The switch opens a yard switch and lights a proceed signal for the train. The dispatcher does not advise the train crew of his plans and written orders are not necessary. Tracks have signals facing in each direction and there is no established flow of traffic in CTC-controlled areas. This gives the dispatcher complete flexibility of train movement. He may run trains on any track in either direction. Regardless of the class of a train, it can continue to move against or ahead of trains of a superior class as long as a signal tells it to do so.

4-73. The CTC system eliminates reading, repeating, interpreting, and remembering the provisions of many train orders that would ordinarily be received. The crew receives visual orders from the signal lights at the time and point where they are to be executed.

4-74. Many foreign railroads use electric interlocking (an early form of CTC). The layout may extend for several kilometers on each side of the control tower from which the interlocking plant is operated by a towerman. However, his control ends where the tracks join the area under the control of the dispatcher. Generally used at congested junctions and terminals, such installations allow the dispatcher and the tower operator more flexibility in handling trains and yard movement in yard limits.

4-75. The dispatchers control panel or board has diagrams representing the track layout. All areas under his jurisdiction controlled by CTC are shown on the panel. Small indicators, mounted at intervals along the board, light up as the train reaches the point on the railroad represented by each particular indicator. A dispatcher can watch the progress of any train within his jurisdiction merely by observing the lights. He can also check the speed of a train by timing it between two lights. He knows when a train makes an unscheduled stop or when it is losing time. The engine crew never knows its exact path of travel until a short distance before reaching a point of divergence. Reduce-speed signals are displayed enough in advance of a change of track to give an engineer time to slow down. The engine crew relies on the permissive and restrictive aspects of the signals automatically displayed when the dispatcher opens or closes the switches.

4-76. The CTC system has a safety feature that makes it impossible for a dispatcher to suddenly take away a permissive route for a train after the engineer comes in sight of the signal. Although the dispatcher can take away the displayed permissive signal and flash a restrictive signal "in the face" of the crew, the switches controlling the track route cannot change if the engineer lacks enough time to comply with the change signal. The system is wired so that the dispatcher cannot set up conflicting moves. Single-track installations are connected so that if a train fails to make a stop specified by a signal, other signals in advance of the train are automatically displayed to stop a train that may be approaching on the same track from the opposite direction.

4-77. CTC is used mainly on single-track sections. Some railroads have converted double-track sections to a single-track layout. The results have been reduced maintenance-of-way costs and accelerated freight train schedules. Using CTC often permits an increase in train density because the delay caused by wait-and-meet orders is reduced. With CTC, a dispatcher is often able to get two trains by a given point without stopping either one. This is done by keeping one moving through a siding while the other passes on the main track. If a siding is long enough, or if a single track branches for several kilometers into a double track, a dispatcher may also have a train pass another in the same direction without reducing the speed of either.